

## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>7</sup> :

E21B 19/16, 19/22, F16L 13/02

A1

(11) International Publication Number:

WO 00/43630

(43) International Publication Date:

27 July 2000 (27.07.00)

(21) International Application Number: PCT/NL00/00037

(22) International Filing Date: 19 January 2000 (19.01.00)

(30) Priority Data:

1011069

19 January 1999 (19.01.99)

NL

(71) Applicant (for all designated States except US): WELL ENGINEERING PARTNERS B.V. [NL/NL]; Tynaarlosestraat 68, NL-9481 AE Vries (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): BAKKER, Thomas, Walburgis [NL/NL]; Tynaarlosestraat 68, NL-9481 AE Vries (NL). VAN MOURIK, Arno [NL/NL]; Stadionkade 96-3, NL-1076 BL Amsterdam (NL).

(74) Agent: OTTEVANGERS, S., U.; Vereenigde, Nieuwe Parklaan 97, NL-2587 BN The Hague (NL).

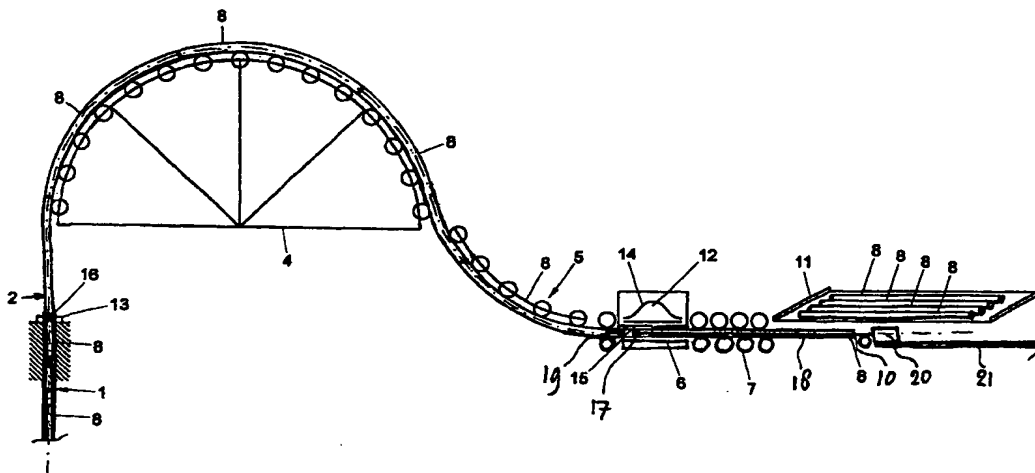
(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published

With international search report.

In English translation (filed in Dutch).

(54) Title: PIPE HANDLING APPARATUS AND METHOD



(57) Abstract

When inserting a tube (2) into a borehole (1) in the ground for extracting minerals, tube parts (8) are successively added to the proximal end of the tube (2) while the tube (2) reaches into the borehole (1). Thereafter, the tube (2) is inserted further into the borehole (1). As the addition of the tube part (8) is carried out by welding, each time an eminently sealing and slender joint between the tube parts is obtained. As the tube parts are successively added to the tube only when this is necessary for inserting the tube further into the ground, winding up the tube to store it prior to insertion is not necessary and the use of a tube-carrying reel which is difficult to handle is thus rendered redundant. Further, an installation for carrying out the proposed method is described.

**FOR THE PURPOSES OF INFORMATION ONLY**

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav Republic of Macedonia	TM	Turkmenistan
BF	Burkina Faso	GR	Greece	ML	Mali	TR	Turkey
BG	Bulgaria	HU	Hungary	MN	Mongolia	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MR	Mauritania	UA	Ukraine
BR	Brazil	IL	Israel	MW	Malawi	UG	Uganda
BY	Belarus	IS	Iceland	MX	Mexico	US	United States of America
CA	Canada	IT	Italy	NE	Niger	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NL	Netherlands	VN	Viet Nam
CG	Congo	KE	Kenya	NO	Norway	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NZ	New Zealand	ZW	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's Republic of Korea	PL	Poland		
CM	Cameroon	KR	Republic of Korea	PT	Portugal		
CN	China	KZ	Kazakstan	RO	Romania		
CU	Cuba	LC	Saint Lucia	RU	Russian Federation		
CZ	Czech Republic	LI	Liechtenstein	SD	Sudan		
DE	Germany	LK	Sri Lanka	SE	Sweden		
DK	Denmark	LR	Liberia	SG	Singapore		
EE	Estonia						

## INTERNATIONAL SEARCH REPORT

Inter. Application No

PCT/NL 00/00037

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 E21B19/16 E21B19/22 F16L13/02

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 E21B F16L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 396 204 A (SHELL INT RESEARCH) 7 November 1990 (1990-11-07) claims 1,2,4 figure 1	1-4,12, 13,18-21
Y	—	5-9
Y	US 3 677 345 A (SIZER PHILLIP S) 18 July 1972 (1972-07-18) column 2, line 34-55	5-9
X	GB 1 405 359 A (INST ELEKTROSWARKI PATONA;NAUK UK SSSR) 10 September 1975 (1975-09-10) claim 1 figure 2	1-4,12, 18-20
	— -/-	

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

6 April 2000

Date of mailing of the international search report

20/04/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Schouten, A

# INTERNATIONAL SEARCH REPORT

Inter. Application No  
PCT/NL 00/00037

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 013 880 A (PUETTMANN FRANZ-JOSEF) 7 May 1991 (1991-05-07) claim 1	1, 18
A	US 3 667 554 A (SMITHERMAN EUGENE A) 6 June 1972 (1972-06-06) the whole document	1, 18
A	US 3 724 567 A (SMITHERMAN E) 3 April 1973 (1973-04-03) the whole document	1, 18
A	US 4 848 455 A (FENYVESI JANOS) 18 July 1989 (1989-07-18) the whole document	1, 18

# INTERNATIONAL SEARCH REPORT

Information on patent family members

Int. Application No

PCT/NL 00/00037

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0396204 A	07-11-1990	AU 620711 B AU 5460290 A CA 2015844 A DE 69002860 D DE 69002860 T JP 2304195 A JP 2747084 B NO 301032 B US 5071053 A	20-02-1992 08-11-1990 03-11-1990 30-09-1993 23-12-1993 17-12-1990 06-05-1998 01-09-1997 10-12-1991
US 3677345 A	18-07-1972	NONE	
GB 1405359 A	10-09-1975	NONE	
US 5013880 A	07-05-1991	DE 3839633 C EP 0370183 A JP 2151369 A	05-04-1990 30-05-1990 11-06-1990
US 3667554 A	06-06-1972	US 3724567 A	03-04-1973
US 3724567 A	03-04-1973	US 3667554 A	06-06-1972
US 4848455 A	18-07-1989	SE 461050 B GB 2212838 A SE 8704678 A	18-12-1989 02-08-1989 26-05-1989